

[ELECTRON EMITTER INCLUDING CARBON NANOTUBES AND ITS APPLICATION IN GAS DISCHARGE DEVICES]

Abstract of Disclosure

An electron emitter includes a coating layer of a mixture of carbon nanotubes and alkali-earth metal oxides on an electrically conducting structure. The preferred carbon nanotubes are those having a diameter less than about 200 nm. A substantial portion of electron emission is liberated from the carbon nanotubes, thus lessening the requirement on the alkali-earth oxides. Such an electron emitter is advantageously used in gas discharge devices to increase the energy efficiency thereof.

Figures

Figure 1: A schematic diagram illustrating the experimental setup for measuring the time delay of a signal. The diagram shows a signal source (S) connected to a delay line (DL) and a detector (D). The signal source is connected to the delay line, which is connected to the detector. The delay line is labeled with a time delay τ . The signal source is labeled with a frequency f . The detector is labeled with a time delay τ . The diagram is labeled with a time delay τ .